# RAILROAD COMMISSION OF TEXAS

# OFFICE OF GENERAL COUNSEL

June 20, 2006

OIL AND GAS DOCKET NO. 06-0246974

APPLICATION OF ANADARKO E&P COMPANY LP, TO CONSIDER AN INCREASED NET GOR AUTHORITY FOR THE E.W. ROSS LEASE WELL NO. 1822, CARTHAGE (TRAVIS PEAK) FIELD, PANOLA COUNTY, TEXAS

HEARD BY: Thomas H. Richter, P.E. DATE OF HEARING: June 16, 2006

APPEARANCES:

Ana Maria Marsland-Griffith Deborah Hawthorne REPRESENTING:

Anadarko E&P Company LP

# EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

This is the unprotested application of Anadarko E&P for a net gas-oil ratio (GOR) which increases the permitted gas limit to 1,500 MCFD for the E.W. Ross Lease Well No. 1822. Anadarko also requests that all overproduction be canceled for its E.W. Ross Lease (RRC Lease No. 14480). The examiner recommends approval.

#### DISCUSSION OF THE EVIDENCE

The Carthage (Travis Peak) Field (designated as a gas field) was discovered in 1943 at 6,243' subsurface depth. The gas field operates pursuant to Special Field Rules and the allocation formula is suspended (1999). This is a very large multi-operator multi-well field. The Carthage (Travis Peak) Field was first designated as an associated oil field in 1987 at 6,190' subsurface depth. The field operates pursuant to Statewide Rules. There are nine operators and 13 wells. The top allowable for a well completed at this depth is 111 BOPD and a casinghead gas limit of 222 MCF per day.

The Anadarko E&P, E.W. Ross Lease Well No. 1822 was completed January 1, 2006 through 7 sets of perforations from 6,248' to 6,480' subsurface depth. The well potentialed at 169 BOPD, 1678 MCFD and 81 BWPD. The GOR was 9929:1 flowing on a 24/64ths choke. The oil gravity is 41.8 °API. The initial flowing tubing pressure was 700 psig. The penalized oil allowable is 22 BOPD.

A net GOR resulting in a gas limit of 1500 MCFD is appropriate. The testing shows that the well is rate sensitive. The E.W. Ross Well No. 1822 was tested over a 30 day period with the following results:

CHOKE (64 <u>ths</u> )	OIL (BOPD)	GAS (MCFD)	GOR	FTP (PSI)	WTR (BPD)
64	95	1230	13300	190	0.7
48	88	1188	13400	170	0.9
38	84	1130	13500	160	1.3
32	**	****	****	***	*.*

The flowing dynamics of the well started declining on the 32/64ths choke. During the six day test period, the following production statistics occurred:

Oil decreased from 78 to 32 BOPD

Gas decreased from 1234 to 934 MCFD

The GOR increased from 13700 to 29,500:1

It is necessary that the well be flowed at the highest rate to maintain sufficient velocity to lift the reservoir fluid. An indication of the diminishing production characteristics was the measurement of total fluid produced. Through the first three choke production rates the total fluid remained essentially constant between 270 and 300 BPD. An attempt was made to produce the well at the penalized allowable of 22 BOPD. It was observed on the smallest choke that the total fluid production was steadily dropping from 270 to 189 BPD as was the flowing wellhead pressure. This is an indication of wellbore fluid loading.

Cancellation of the over production will not harm correlative rights. The subject well is surrounded by Carthage (Travis Peak) gas wells that are producing at 100% deliverability. The Travis Peak formation is a series of stacked, discontinuous, lenticular sand packages that are not necessarily present from well to well.

### FINDINGS OF FACT

- Notice of this application was given to all person entitled to notice at least ten (10) days prior to the hearing.
- There was no protest of the application.
- The Carthage (Travis Peak) Field was first designated as an associated oil field in 1987 at 6,190' subsurface depth.
  - The field operates pursuant to Statewide Rules.

- b. The top allowable for a well completed at this depth is 111 BOPD and a casinghead gas limit of 222 MCF per day.
- The Anadarko E&P, E.W. Ross Lease Well No. 1822 was completed January 1, 2006 through 7 sets of perforations from 6,248' to 6,480' subsurface depth. The well potentialed at 169 BOPD, 1678 MCFD and 81 BWPD.
- A net GOR resulting in a gas limit of 1500 MCFD is appropriate as the testing shows that the well is rate sensitive.
  - a. It is necessary that the well be flowed at the highest rate to maintain sufficient velocity to lift the reservoir fluid.
  - An indication of the diminishing production characteristics was the measurement of total fluid produced.
  - c. Through the first three choke production rates the total fluid remained essentially constant between 270 and 300 BPD and on the fourth choke the total fluid production was steadily dropping from 270 to 189 BPD as was the flowing wellhead pressure. This is an indication of wellbore fluid loading.
- Cancellation of the over production of the E.W. Ross Lease (RRC Lease No. 14480) will not harm correlative rights.
  - a. The subject well is surrounded by Carthage (Travis Peak) gas wells that are producing at 100% deliverability.
  - b. The Travis Peak formation is a series of stacked, discontinuous, lenticular sand packages that are not necessarily present from well to well.

## CONCLUSIONS OF LAW

- Notice of this hearing was provided in accordance with all applicable regulatory statutes and rules.
- All things have occurred or been accomplished to afford the Commission the jurisdiction to consider and decide this matter.
- Consideration and approval of this application for a gas-oil ratio which results in a
  casinghead gas limit of 1500 MCFD is a matter properly within the jurisdiction of the
  Commission to foster conservation and prevent waste.

- Approval of the proposed application of Anadarko E&P for a net gas-oil ratio which increases the permitted GOR to a gas limit of 1500 MCFD will foster conservation and prevent waste.
- Cancellation of overproduction will not harm correlative rights.

#### EXAMINER'S RECOMMENDATION

It is recommended that the application of Anadarko E&P Company for a net gas-oil ratio (GOR) which increases the permitted GOR to a gas limit of 1500 MCFD for the E.W. Ross Well No. 1822 be approved. It is further recommended that all overproduction for the E.W. Ross Lease (RRC Lease No. 14480) be canceled.

Respectfully submitted,

Thomas H. Richter, P.E. Technical Examiner

Office of General Counsel